

AMENDMENTS TO THE CLAIMS:

Please cancel claims 3, 6, 7, 11, 15, 16, 25 and 26 and amend claims 1, 9, 17-19 and 21 as shown below.

1. (Currently Amended) An aerosolized composition for transfecting a cell with a nucleic acid, comprising:

a DNA sequence chosen from a plasmid, a phagemid and a cosmid; and
water; and

a cationic aminoglycoside;

wherein the composition has a physiological pH and the aerosol is comprised of particles having an aerodynamic diameter in a range of from about 0.5 micrometer to about 12 micrometers and said DNA sequence in the particles is condensed by interaction with said cationic aminoglycoside and further wherein the condensation comprises a reduction of about 10³ to about 10⁶ in the physical volume of said DNA sequence.

2. (Original) The composition according to claim 1, wherein said cationic aminoglycoside is bacteriostatic, and has an average molecular weight in a range of from 300 Daltons to about 800 Daltons.

3. (Canceled)

4. (Original) The composition according to claim 1, wherein said cationic aminoglycoside is selected from the group consisting of Gentamicin, Tobramycin, Amikacin, Streptomycin, Neomycin, Sisomicin and Netilmicin.

5. (Previously Presented) The composition according to claim 1, wherein said DNA sequence encodes a biologically active protein.

6. (Canceled)

7. (Canceled)

8. (Previously Presented) The composition according to claim 1, wherein said-DNA sequence comprises at least one coding region.

9. (Currently Amended) The composition according to claim 6 1, wherein the aerosol particles have an aerodynamic diameter in a range of from about 2 micrometers to about 6 micrometers.

10. (Previously Presented) The composition according to claim 1, wherein the composition is characterized by an ability to transfect human cells with an efficiency of 200% more as compared to that obtained in the absence of the cationic aminoglycoside.

11. (Canceled)

12. (Original) The composition according to claim 1, wherein said composition further comprises at least one functional group, wherein said functional group is selected from the group consisting of targeting moieties, nuclear localization peptides and endosomolytic peptides.

13. (Original) The composition according to claim 1, wherein said composition further comprises at least one therapeutically acceptable lipid.

14. (Previously Presented) The composition according to claim 13, wherein said therapeutically acceptable lipid comprises a liposome encapsulating said DNA sequence.

15. (Canceled).

16. (Canceled)

17. (Currently Amended) The method according to claim ~~16~~ 27, wherein said DNA sequence is condensed by the interaction with said cationic aminoglycoside.

18. (Currently Amended) The method according to claim ~~17~~ 27, wherein said condensation comprises a reduction of about 10^3 to about 10^6 in the physical volume of said DNA sequence.

19. (Currently Amended) The method according to claim ~~16~~ 27, wherein said DNA sequence encodes a biologically active protein which is therapeutically effective.

20. (Canceled)

21. (Currently Amended) The method according to claim ~~20~~ 27, wherein said aerosol has particles with an aerodynamic particle size in a range of from about 2 micrometers to about 6 micrometers.

22. (Original) The method according to claim 21, wherein said cationic aminoglycoside is selected from the group consisting of Gentamicin, Tobramycin, Amikacin, Streptomycin, Neomycin, Sisomicin and Netilmicin.

23. (Original) The method according to claim 22, wherein the composition further comprises at least one therapeutically acceptable lipid.

24. (Original) The method according to claim 23, wherein the lipid is a liposome encapsulating said nucleic acid.

25. (Canceled)

26. (Canceled)

27. (Previously Presented) A method of treating a patient in need of a protein, comprising: aerosolizing a formulation comprising a DNA sequence chosen from a plasmid, a phagemid and a cosmid and a cationic aminoglycoside to create aerosol particles having an aerodynamic diameter in a range of from about 0.5 micrometers to about 12 micrometers;

inhaling the aerosol into a patient's lungs; and

allowing the inhaled aerosol to contact cells for a period of time and under conditions such that the DNA sequence transfects the cells and expresses a therapeutically effective amount of a biologically active protein resulting in treating the patient in need of the protein.

28. (Previously Presented) The method according to claim 27, wherein the aerosolizing is carried out by forcing said composition through pores of a membrane, wherein said aerosol has a particle size ranging from about 2 to about 6 microns.